

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (withdrawn): An isolated polynucleotide comprising a sequence selected from the group consisting of: SEQ ID NO: 1-80.

Claim 2 (withdrawn): An isolated polynucleotide comprising a sequence selected from the group consisting of:

- (a) complements of SEQ ID NO: 1-80;
- (b) reverse complements of SEQ ID NO: 1-80; and
- (c) reverse sequences of SEQ ID NO: 1-80.

Claim 3 (withdrawn): An isolated polynucleotide comprising a sequence selected from the group consisting of:

- (a) sequences having at least 75% identity to a sequence of SEQ ID NO: 1-80;
- (b) sequences having at least 90% identity to a sequence of SEQ ID NO: 1-80; and
- (c) sequences having at least 95% identity to a sequence of SEQ ID NO: 1-80,

wherein the polynucleotide encodes a polypeptide having substantially the same functional properties as a polypeptide encoded by SEQ ID NO: 1-80.

Claim 4 (withdrawn): An isolated polynucleotide comprising a sequence selected from the group consisting of:

- (a) nucleotide sequences that are 200-mers of a sequence recited in SEQ ID NO: 1-80;
- (b) nucleotide sequences that are 100-mers of a sequence recited in SEQ ID NO: 1-80;
- (c) nucleotide sequences that are 40-mers of a sequence recited in SEQ ID NO: 1-80; and
- (d) nucleotide sequences that are 20-mers of a sequence recited in SEQ ID NO: 1-80;

Claims 5 and 6 (cancelled).

Claim 7 (withdrawn): A genetic construct comprising a polynucleotide of any one of claims 1-3.

Claim 8 (withdrawn): A transgenic host cell comprising a genetic construct according to claim 7.

Claim 9 (withdrawn): A genetic construct comprising, in the 5'-3' direction:

- (a) a gene promoter sequence; and
- (b) a polynucleotide sequence comprising at least one of the following: (1) a polynucleotide coding for at least a functional portion of a polypeptide of SEQ ID NO: 81-183; and (2) a polynucleotide comprising a non-coding region of a polynucleotide of any one of claims 1-3.

Claim 10 (withdrawn): The genetic construct of claim 9, wherein the polynucleotide is in a sense orientation.

Claim 11 (withdrawn): The genetic construct of claim 9, wherein the polynucleotide is in an anti-sense orientation.

Claim 12 (withdrawn): The genetic construct of claim 9, wherein the gene promoter sequence is functional in a prokaryote or eukaryote.

Claim 13 (withdrawn): A transgenic host cell comprising a construct of claim 9.

Claim 14 (withdrawn): A transgenic organism comprising a transgenic host cell according to claim 13, or progeny thereof.

Claim 15 (withdrawn): The transgenic organism of claim 15, wherein the organism is selected from the group consisting of *Lactobacillus* species.

Claims 16 and 17 (cancelled).

Claim 18 (currently amended): An isolated polypeptide comprising ~~an amino acid sequence selected from the group consisting of sequences recited in SEQ ID NO: 81-183~~ SEQ ID NO: 172.

Claim 19 (cancelled).

Claim 20 (withdrawn): An isolated polynucleotide that encodes a polypeptide of any one of claims 18 and 19.

Claim 21 (currently amended): An isolated polypeptide encoded by ~~a polynucleotide of any one of claims 1-3~~ SEQ ID NO: 73.

Claim 22 (currently amended): A fusion protein comprising at least one polypeptide according to any one of claims 18 and ~~19~~ 21.

Claim 23 (currently amended): A composition comprising a polypeptide according to any one of claims 18 and ~~19~~ 21 and at least one component selected from the group consisting of: physiologically acceptable carriers and immunostimulants.

Claim 24 (cancelled).

Claim 25 (currently amended): A method for treating a disorder in a mammal, comprising administering a composition according to claim ~~24~~ 23.

Claim 26 (currently amended): A method for treating a disorder in a mammal, comprising administering a composition according to claim ~~25~~ 27.

Claim 27 (new): A composition comprising a fusion protein of claim 22 and at least one component selected from the group consisting of: physiologically acceptable carriers and immunostimulants.

Claim 28 (new): An isolated polypeptide comprising an amino acid sequence selected from the group consisting of: sequences having at least 75% identity to SEQ ID NO: 172, wherein the polypeptide possesses pyruvate oxidase activity.

Claim 29 (new): An isolated polypeptide comprising an amino acid sequence selected from the group consisting of: sequences having at least 90% identity to SEQ ID NO: 172, wherein the polypeptide possesses pyruvate oxidase activity.

Claim 30 (new): An isolated polypeptide comprising an amino acid sequence selected from the group consisting of: sequences having at least 95% identity to SEQ ID NO: 172, wherein the polypeptide possesses pyruvate oxidase activity.

Claim 31 (new): A composition comprising a polypeptide of claim 28 and at least one component selected from the group consisting of: physiologically acceptable carriers and immunostimulants.

Claim 32 (new): A composition comprising a polypeptide of claim 29 and at least one component selected from the group consisting of: physiologically acceptable carriers and immunostimulants.

Claim 33 (new): A composition comprising a polypeptide of claim 30 and at least one component selected from the group consisting of: physiologically acceptable carriers and immunostimulants.